

STANDOFF BIOAGENT-DETECTION APPARATUS AND METHOD USING  
MULTI-WAVELENGTH DIFFERENTIAL  
LASER-INDUCED FLUORESCENCE

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Abstract of the Disclosure

A standoff bioagent-detection apparatus and method use a direct ultraviolet source to detect bioagents. In some embodiments, a standoff bioagent-detection apparatus and method use laser-induced fluorescence to determine the presence of a biological agent having an aromatic-protein shell, such as Tryptophan. In some  
10 embodiments, multi-wavelength differential laser-induced fluorescence helps reduce false alarm caused by naturally occurring interferants. In some embodiments, a full range of ultraviolet wavelengths is initially simultaneously generated to fluoresce Tryptophan to determine if an ambient level is excessive. When the ambient level is  
15 excessive, individual ultraviolet wavelengths may be generated in differential pairs and the detected fluorescence levels may be correlated with atmospheric absorption levels for Tryptophan to determine if a bioagent is highly likely to be present.